

EXHIBIT B

Principal Investigator/Program Director (Last, first, middle):

Cruikshank, William**BIOGRAPHICAL SKETCH**

Provide the following information for the key personnel in the order listed for Form Page 2.
Follow the sample format on preceding page for each person. DO NOT EXCEED FOUR PAGES.

NAME		POSITION TITLE	
William W. Cruikshank		Professor	
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Washington and Jefferson College, Washington, PA	B.S.	1977	Biology
Boston University, Boston, MA	Ph.D.	1988	Biochemistry

Positions

5/88-1990 Post-doctoral Fellow, Pulmonary Center, Boston Univ. School of Medicine.
1990-1995 Assistant Professor of Medicine
1995-2001 Associate Professor of Medicine
2001-Present Professor of Medicine

Honors and Awards

1990-1993 American Federation for AIDS Research Fellowship
1997-2000 Career Investigator Award from the American Lung Association
5/99 Visiting Professor at University of Massachusetts Medical Center
8/99 Visiting Professor at Emory University
10/99 Visiting Professor at Utrecht University, The Netherlands
05/00 Visiting Professor at Utrecht University, The Netherlands

Publications (Partial list of 97 publications)

Cruikshank, W.W., A. Long, H. Kornfeld, L. Teran, S.T. Holgate and D.M. Center. 1995. Early identification of lymphocyte chemoattractant factor (LCP) and macrophage inflammatory protein 1 α (MIP1 α) in BAL of antigen challenged asthmatics. *Am J. Resp. Cell Mol. Biol.* 13:738-747.

Theodore, A.C., D.M. Center, J. Nicoll, G. Fine, H. Kornfeld and W.W. Cruikshank. 1996. CD4 ligand IL-16 inhibits the mixed lymphocyte reaction. *J. Immunol.* 157:1958-1964.

Cruikshank, W., H. Kornfeld, J. Berman, J., Chupp, G., Keane, J., and D. Center. 1996 Biological activity of interleukin-16. *Nature* 382:501-502.

Center, D., H. Kornfeld and W. Cruikshank. 1996 IL-16, Bioactivities of a CD4 ligand. *Immunol. Today* 17:476-481.

Mackewicz, C.E., J.A. Levy, W.W. Cruikshank, H. Kornfeld, and D.M. Center. 1996. Potential role of IL-16 in CD8+ cell mediated suppression of HIV replication in infected humans. *Nature.* 383:488-489.

Cruikshank, W.W., K. Lim, A.C. Theodore, J. Cook, G. Fine, P.F., Weller, and D.M. Center. 1996. IL-16 inhibition of CD3-dependent lymphocyte activation and proliferation. *J. Immunol.* 157:5240-5248.

Maciaszek, J.W., N.A. Parada, W.W. Cruikshank, D.M. Center, H. Kornfeld, and G.A. Viglianti. 1997. Interleukin-16 represses HIV-1 promoter activity. *J. Immunol.* 158:5-9.

Laberge, S., P. Ernst, O. Ghaffar, W.W. Cruikshank, H. Kornfeld, D.M. Center, and Q. Hamid. Increased expression of interleukin-16 in bronchial mucosa of subjects with atopic asthma. 1997 *Am. J. Resp. Cell Mol. Biol.* 17:193-202.

Viglianti, G., N. Parada, J. Maciaszek, H. Kornfeld, D. Center, and W. Cruikshank. 1997 IL-16 anti-HIV-1 therapy. *Nature Med.* 3:938.

Biddison, W.E., W.W. Cruikshank, D.M. Center, C.M. Pelfrey, D.D. Taub, and R.V. Turner. 1998. CD8+ myelin peptide-specific T cells can chemoattract CD4+ myelin peptide-specific T cells: Importance of IFN-Inducible protein 10. *J. Immunol.* 160:444-448.

Zhang, Y., D.M. Center, D.M.H. Wu, W.W. Cruikshank, J. Yuan, D.W. Andrews and H. Kornfeld. 1998. Processing and activation of IL-16 by caspase-3. *J. Biol. Chem.* 273:1144-1148.

- Hessel, W., W. Cruikshank, I. Van Ark, J. De Bie, B. Van Esch, G. Hofman, F. Nijkamp, D. Center, and A. Van Oosterhout. 1998. Involvement of IL-16 in the induction of airway hyper-responsiveness and upregulation of IgE in a murine model of allergic asthma. *J. Immunol.* 160:2998-3005.
- Parada, N., D. Center, H. Kornfeld, W. Rodriguez, J. Cook, M. Vallen, and W.W. Cruikshank. 1998. Synergistic activation of CD4+ T cells by interleukin-16 and interleukin-2. *J. Immunol.* 160:2115-2120.
- Vallen Mashikian, M., R.E. Tarpy, J.J. Saukkonen, K.G. Lim, G.D. Fine, W.W. Cruikshank, and D.M. Center. 1998. Identification of Interleukin 16 as the lymphocyte chemotactic activity in the bronchoalveolar lavage fluid of histamine-challenged asthmatics. *J. Allergy Clin Immunol.* 101:786-792.
- Cruikshank, W., H. Kornfeld, and D. Center. 1998. Signaling and functional properties of IL-16. *International Reviews of Immunol.* 16:523-540.
- Wu, D., Y. Zhang, N. Parada, H. Kornfeld, J. Nicol, D. Center, and W. Cruikshank. 1999. Processing and release of interleukin-16 from CD4+ but not CD8+ T cells is activation dependent. *J. Immunol.* 162:1287-1293.
- Nicoll, J., W.W. Cruikshank, W. Brazer, Y. Liu, D.M. Center, and H. Kornfeld. 1999. Identification of domains in IL-16 critical for biological activity. *J. Immunol.* 163:1827-1832.
- Liu, Y., W.W. Cruikshank, T. O'Loughlin, P. O'Reilly, D.M. Center, and H. Kornfeld. 1999. Identification of a CD4 domain required for interleukin-16 binding and lymphocyte activation. *J. Biol. Chem.* 274:23387-23395.
- Kaser, A., S. Dunzendorfer, W.W. Cruikshank, C.J. Wiedermann, and H. Tilg. 1999. A role for interleukin-16 in the cross-talk between dendritic cells and T cells. *J. Immunol.* 163:3232-3238.
- Yamasaki, H., M. Ando, W. Brazer, D.M. Center, and W.W. Cruikshank. 1999. Polarized Type-1 cytokine profile in bronchoalveolar lavage T cells of patients with hypersensitivity pneumonitis. *J. Immunol.* 163:3516-3523.
- Vallen-Mashikian, M., T.C. Ryan, A. Seman, W. Brazer, D.M. Center, and W.W. Cruikshank. 1999. Reciprocal desensitization of CCR5 and CD4 is mediated by IL-16 and MIP-1 β respectively. *J. Immunol.* 163:3123-3130.
- Cruikshank, W., H. Kornfeld, and D.M. Center. 1999. Structure and function of Interleukin-16. *Current Trends in Immunol.* 2:99-109.
- Hidi, R., V. Riches, M. Al-Ali, W.W. Cruikshank, D.M. Center, S. Holgate, and R. Djukanovic. 2000. Allergen-induced T cell chemotactic activity is atopic asthma due to interleukin-16 and RANTES: role of B7-CD28/CTLA-4 co-stimulation and nuclear transcription factor NF- κ B. *J. Immunol.* 164:412-418.
- Cruikshank, W.W., H. Kornfeld, and D.M. Center. 2000. Interleukin-16. In: *New cytokines as potential drugs (PIR)*. Eds. S.K. Narula and R. Coffman. Birkhauser Pub. pp 31-51.
- Sciaky, D., W. Brazer, D. M. Center, W. W. Cruikshank, and T. J. Smith. 2000. Cultured human fibroblasts express constitutive IL-16 mRNA: Cytokine induction of active IL-16 protein synthesis through a caspase-3-dependent mechanism. *J. Immunol.* 164: 3806-3814.
- Center, D.M., T.C. Ryan, H. Kornfeld, and W.W. Cruikshank. 2000. Interleukin 16: implications for CD4 functions and HIV progression. *Immunol. Today* 21:272-279.
- Cruikshank, W. W., H. Kornfeld, and D. M. Center. 2000. Interleukin-16. *J. Leuk. Biol.* 67:757-765.
- Yoshimoto, T., C. Wang, T. Yoneto, A. Matsuzawa, W. W. Cruikshank, and H. Nariuchi. 2000. A critical role of IL-16 in delayed-type hypersensitivity (DTH) reaction. *Blood* 95:2869-2874.
- Fujita, T., Y. Matsumoto, I. Hirai, K. Ezoe, T. Saito, A. Yagihashi, T. Torigoe, K. Homma, S. Takahashi, W. Cruikshank, K. Kimbow, and N. Sato. 2000. Immunosuppressive effect of interleukin-16-cDNA-transfected human squamous cell line as a model for tolerogenic skin allograft. *Cell. Immunol.* 202:54-60.
- Keates, A.C., I. Castagliuolo, W.W. Cruikshank, B. Qiu, K. O'Dell and C. Kelly. 2000. Interleukin-16 participates in TNBS colitis in mice and is upregulated in Crohn's disease. *Gastroenterology*. 119:972-982.
- Van Drenth, C., A. Jenkins, L. Ledwich, T. Ryan, M. Vallen-Mashikian, W. Brazer, D. Center and W. Cruikshank. 2000. Desensitization of CXCR4, mediated by IL-16/CD4, is independent of p56lck enzymatic activity. *J. Immunol.* 165:6356-6363.
- Pinsonneault, S., S. Bassam, B. Mazar, W. Cruikshank and S. Laberge. 2001. IL-16 inhibits IL-5 Production by antigen-stimulated T cells in atopic subjects. *J Allergy Clin. Immunol.* 107:477-482.
- Little, F., D. Center, and W. Cruikshank. 2002. IL-9 stimulates release of chemotactic factors from human bronchial epithelial cells. *Am. J. Respir. Cell Mol. Biol.* 25:347-352.
- Pritchard, J., N. Horst, W. Cruikshank and T. Smith. 2002. Immunoglobulins from patients with Graves' disease induce the expression of T cell chemoattractants in their fibroblasts. *J. Immunol.* vol 168:942-950.
- De Bie, J., P. Henricks, W. Cruikshank, J. Hoevenaars, F. Nijkamp, and A. Van Oosterhout. 2002. Exogenous IL-16 inhibits antigen-induced airway hyperreactivity, eosinophilia and Th2-type cytokine production in mice. *Clin. Exp. Allergy*, In Press.